

FORSTER - ANIMALS OF NORTH AMERICA - LONDON, 1771



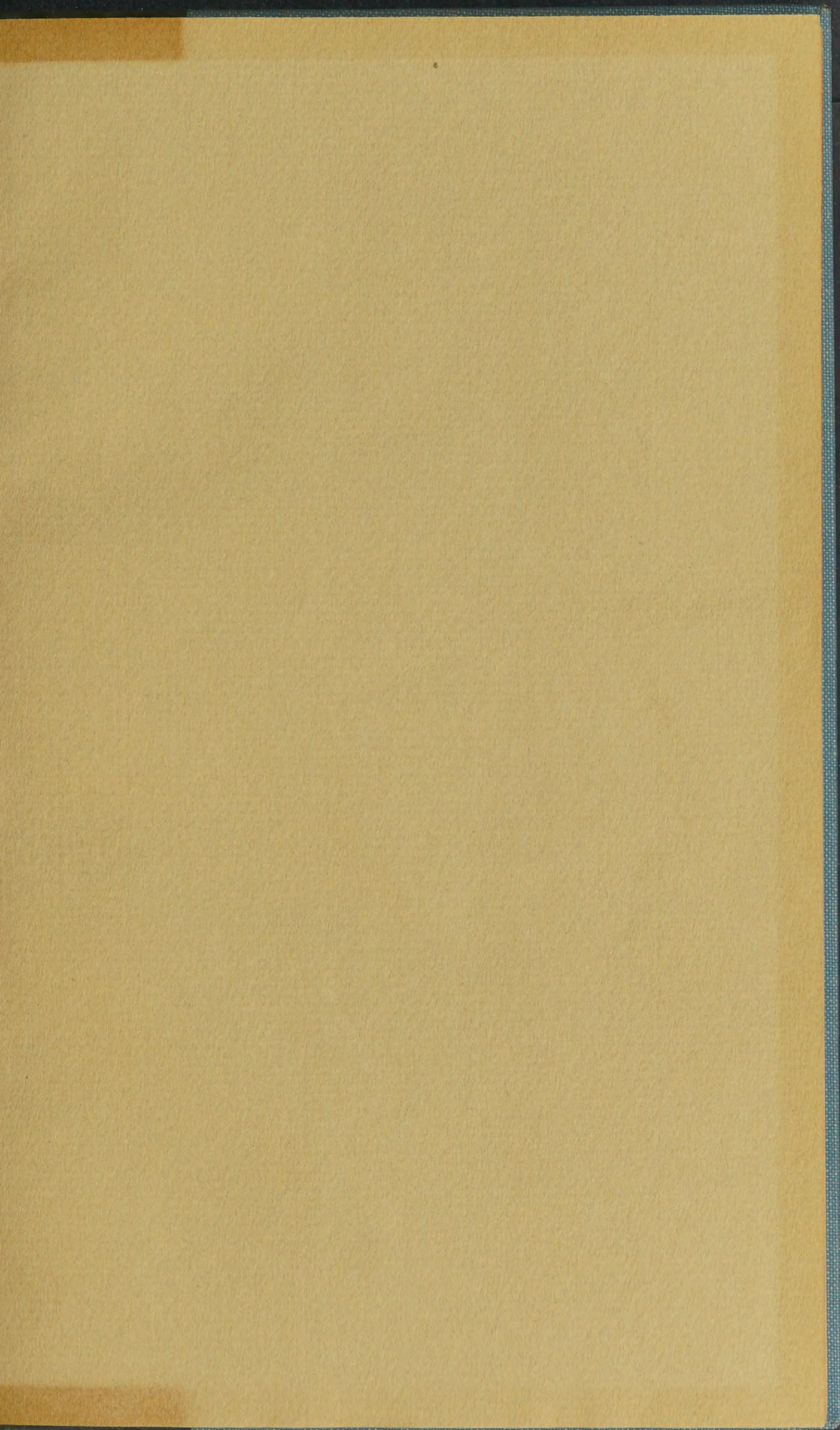


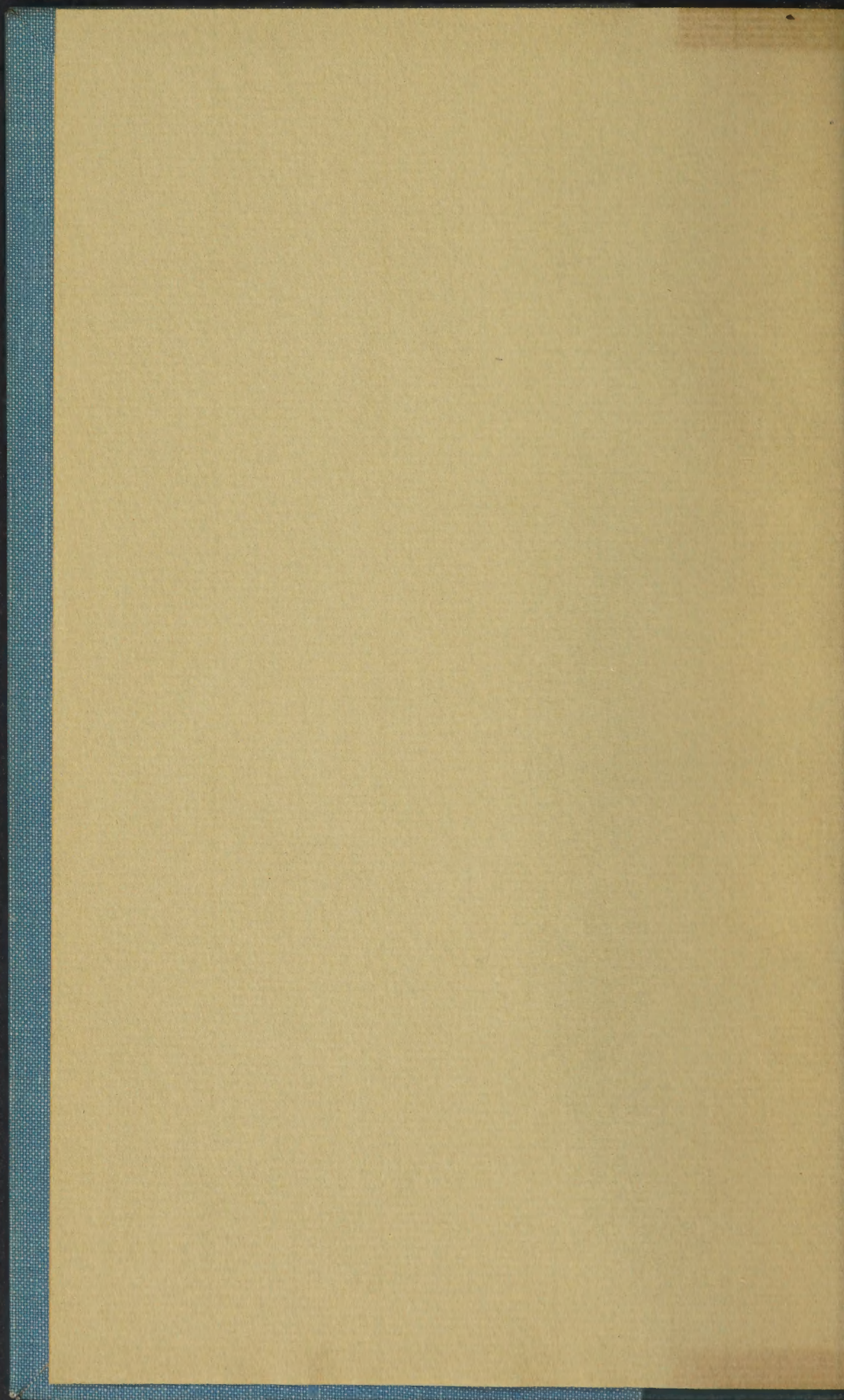


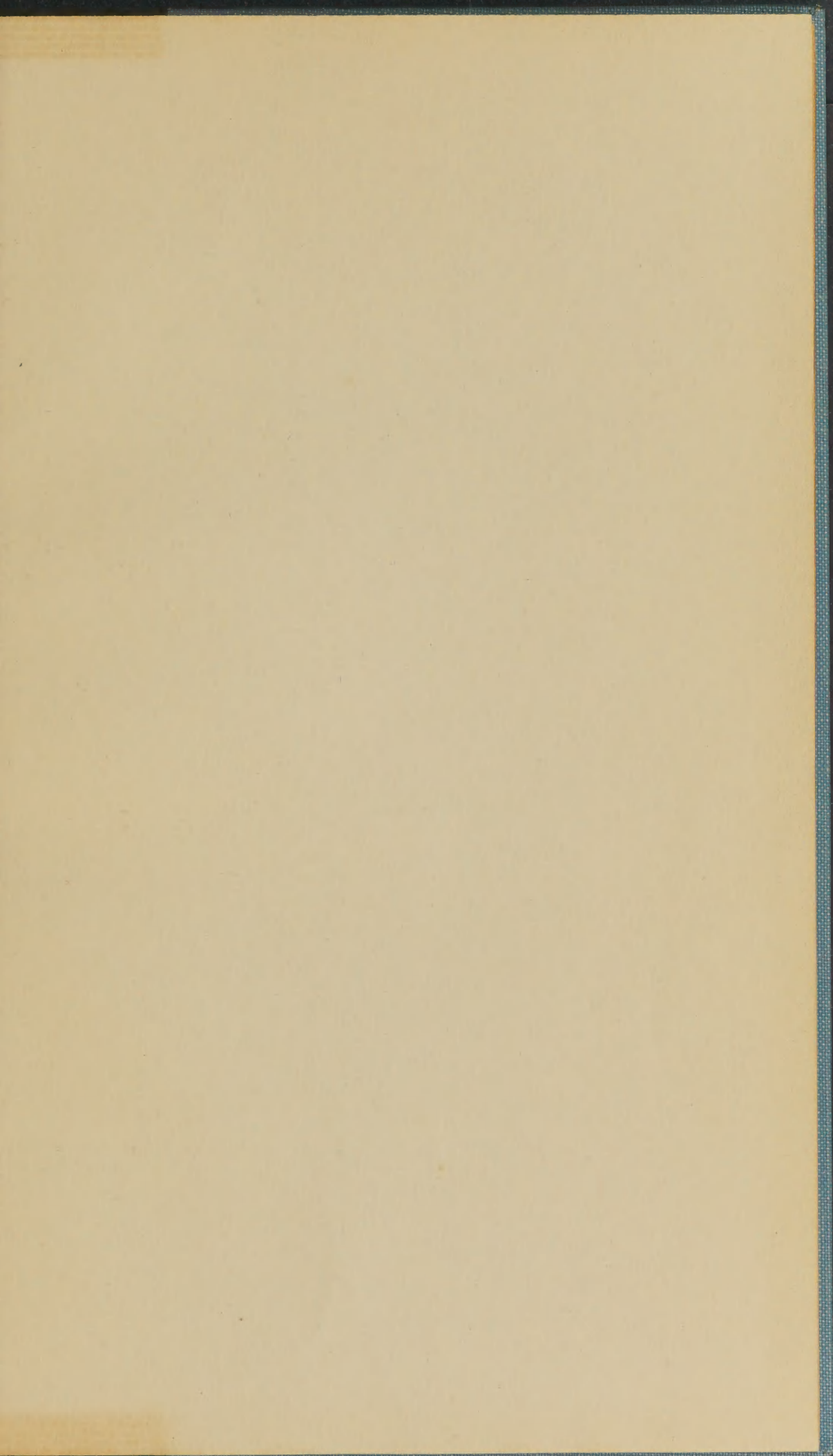
591.97

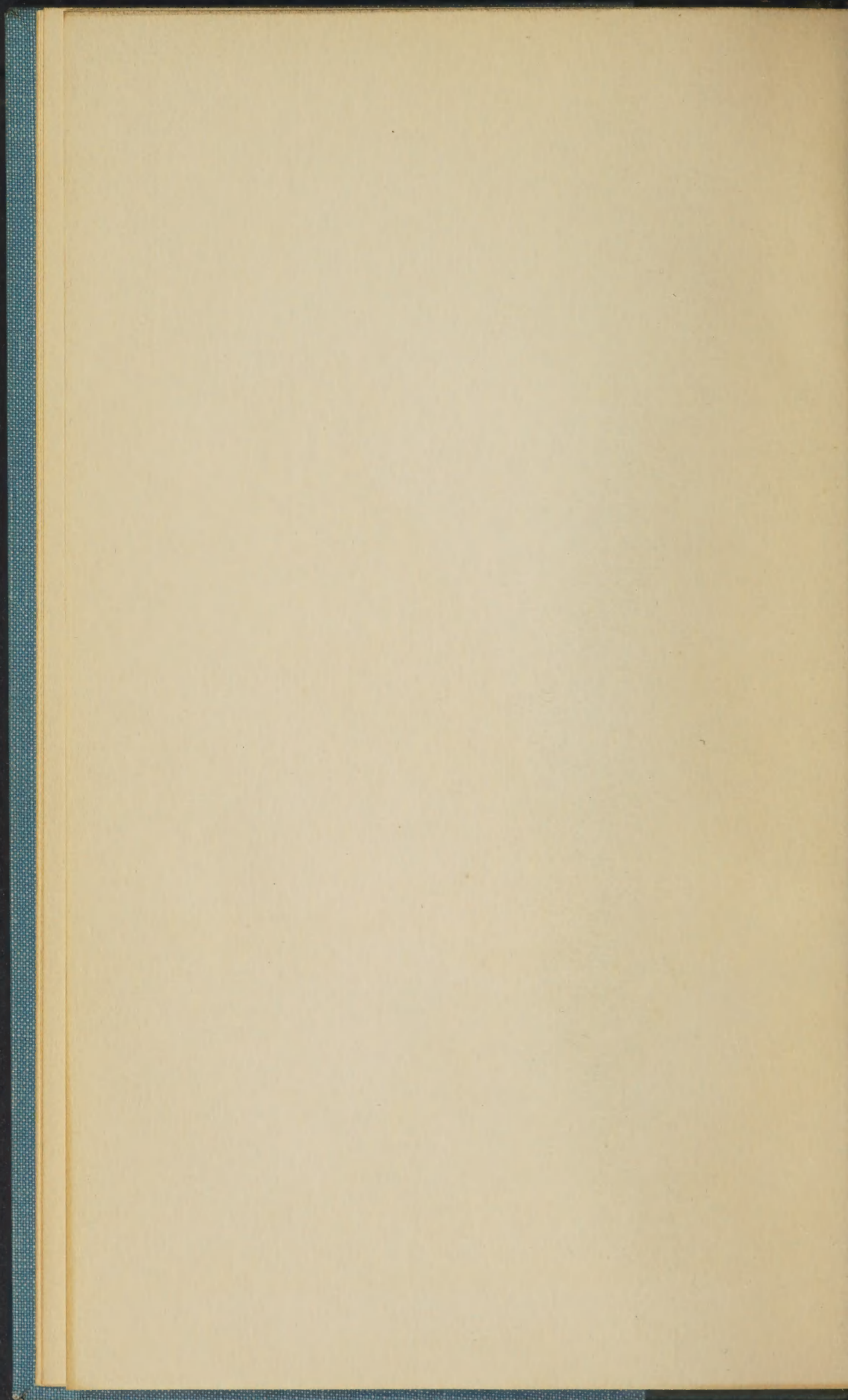
F 733

R. C. 18









1928

434

7

Little Falcons.
Falco Sparverius, LINN.



M. Griffith Pincht

R. Murray Sc^{pt}

A
CATALOGUE
OF THE
ANIMALS
OF
NORTH AMERICA.

CONTAINING,
An Enumeration of the known QUADRUPEDS, BIRDS,
REPTILES, FISH, INSECTS, Crustaceous and
Testaceous ANIMALS; many of which are New, and
never described before.

To which are added,
SHORT DIRECTIONS
FOR
COLLECTING, PRESERVING, and TRANSPORTING,
all Kinds of
NATURAL HISTORY CURIOSITIES.
By JOHN REINHOLD FORSTER, F.A.S.

*Non ad unam Naturæ formam opus suum præstat; sed in ipsa
varietate se jactat.*

SENECA, Quæst. Nat. VII. 27.

L O N D O N ;
Sold by B. WHITE, at Horace's Head, in Fleet-Street.

M.DCC.LXXI.

CATALOGUE

AMERICAN

NOTES

AMERICAN

AMERICAN

AMERICAN

59.97
F. 123
R. C.

T O

MARMADUKE TUNSTALL, Esq.

Dear S I R,

THE repeated favours *You* were so kind to bestow upon me, in the compass of a short acquaintance, and the zeal with which *You* promote the great cause of Natural History; encouraged me to prefix *Your* Name to this Publication, and give me an opportunity, thus publicly, to acknowledge the assistance *Your* benevolent and generous friendship favoured me with.

Nothing is left to me, but the simple mention of thanks; and my sincere wishes for *Your* health, happiness, and the enjoyment of every intellectual and moral blessing. I am, with the truest regard,

Dear S I R,

your most obliged,

obedient,

humble Servant,

London, April
24, 1771.

JOHN REINHOLD FORSTER

3/13
e

To the READER.

I Had hinted in the Preface to the third volume of *Kalm's* Travels, that I could publish but an imperfect and small catalogue of *North American* animals; and therefore declined to give it. Since that time, I have been pressed by some worthy friends to publish that catalogue, such as it is; and what is still more, I have been favoured with ample materials by a Gentleman, who is forming a collection for a Natural History of *North America*, and hopes by this to incite the inquisitive and learned resident in that country, to search, and to transmit to their friends in *England*, the productions of their several provinces. The Zoology of the first four classes of animals in *Great Britain*, has been very accurately and compleatly published; that of the country of the descendants of *Great-Britain* ought with most propriety to follow, as it interests the Mother Country most. These reasons had a great weight with me; and I offer this small catalogue merely as an essay towards forming a more compleat Natural History of that extensive continent. To instruct the Collectors, I have added to this list some short directions for the best method of preserving and transporting the various subjects of Natural History.

The Quadrupeds of this list are referred to the Synopsis of Quadrupeds of Mr. *Pennant*; the Birds, Fish, Reptiles, Insects, and Crustacea, to *Linnaeus*, *Brissou*, Mr. *Edwards*,
and

To the R E A D E R.

and *Catesby*; some few excepted, which are referred to the *Planches enluminées*, published at *Paris*, and marked here *Pl. enl.* so as *Catesby* with a single *C.* and those which are common to *Great Britain* and *America*, to the *British Zoology*.

The Animals which have recently been discovered in *North America*, or overlooked by Mr. *Catesby*, are distinguished by *N. S.* marking a *New Species*; and by *B.* and *Mus. Bl.* The first authority is from a Collection formed by a Gentleman in his voyage to *Newfoundland*; the second, from a most select and numerous Collection of *American* Animals, belonging to a Lady in *Lancashire*.

The New Species, in the Catalogue of Birds, I had leave to insert here from Mr. *Pennant's* manuscript; and those of Insects are taken from my own manuscript descriptions of such Insects as were not described by Dr. *Linnaeus*.

The print prefixed here represents an elegant little Falcon, drawn and engraved from a fine specimen lately brought over from *North America*.

N. B. The Animals marked *E* are of European Origin; having been introduced there by the Spaniards or English, after the discovery of the New World: and those marked *Eur.* are originally natives of both Continents.



CLASS I. QUADRUPEDS.

DIV. I. HOOFED.

SECT. I. WHOLE HOOFED.

| Genus. | | | syn. quad. |
|----------|----------|-----------|------------|
| I. HORSE | Generous | <i>E.</i> | N° 1 |
| | Afs | <i>E.</i> | 3 |

SECT. II. CLOVEN HOOFED.

| | | | |
|-----------|----------------|-------------|-------|
| II. SHEEP | Common | <i>E.</i> | 8 |
| III. GOAT | Domestic | <i>E.</i> | P. 14 |
| IV. DEER | Elk, or Moose, | <i>Eur.</i> | N° 35 |
| | Rein | <i>Eur.</i> | 36 |
| | Stag | <i>Eur.</i> | 38 |
| | Virginian | N. S. | 39 |
| | Roe? | | 43 |
| V. HOG | Common | <i>E.</i> | 54 |

DIV. II. DIGITATED QUADRUPEDS.

| | | | |
|----------|----------|-------------|--------|
| VI. DOG | Faithful | <i>E.</i> | N° 110 |
| | Wolf | <i>Eur.</i> | 111 |
| | Fox | <i>Eur.</i> | 112 |
| | Arctic | <i>Eur.</i> | 113 |
| | Grey | | 114 |
| | Silvery | | 115 |
| VII. CAT | Brown | | 129 |
| | Common | <i>E.</i> | 133 |
| | Lynx | <i>Eur.</i> | 135 |
| | Bay Lynx | N. S. | 136 |

VIII.

| | | | |
|----------------|-----------------|-------------|--------------------|
| VIII. BEAR | Black | <i>Eur.</i> | 138 |
| | Polar | | 139 |
| | Wolverene | <i>Eur.</i> | 140 |
| | Raccoon | | 141 |
| IX. BADGER | American | N. S. | 143 |
| X. OPOSSUM | Virginian | | 144 |
| XI. WEESEL | Stoat | <i>Eur.</i> | N ^o 151 |
| | Pine Martin | <i>Eur.</i> | 155 |
| | Fisher | N. S. | 157 |
| | Pekan and Vison | | 166 |
| | Striated | | 167 |
| | Skunk | | 167 |
| XII. OTTER | Greater | <i>Eur.</i> | 173 |
| | Lesser | <i>Eur.</i> | 174 |
| | Sea | | 175 |
| XIII. HARE | Common | <i>Eur.</i> | 181 |
| | Alpine | <i>Eur.</i> | 184 |
| | Rabbit | <i>E.</i> | 185 |
| XIV. BEAVER | Castor | <i>Eur.</i> | 190 |
| | Musk | | 191 |
| XV. PORCUPINE | Canada | | 196 |
| XVI. MARMOT | Maryland | | 198 |
| | Quebec | N. S. | 199 |
| XVII. SQUIRREL | Common | <i>Eur.</i> | 206 |
| | & Hudson's Bay | | |
| | Grey | | 209 |
| | Black | | 210 |
| | β Cat | | |
| | Ground | | 216 |
| | Flying | <i>Eur.</i> | 221 |
| XVIII. RAT | β hooded | | |
| | Black | <i>E.</i> | 226 |
| | Brown? | | 227 |
| | Water | <i>Eur.</i> | 228 |
| | Mouſe | <i>E.</i> | 229 |
| | | A 4 | Field |

| | | | |
|--------------|--------------|-------------|--------|
| | Field | <i>Eur.</i> | 230 |
| | Short-tailed | <i>Eur.</i> | 233 |
| XIX. MOLE | β. yellow | | p. 312 |
| | Radiated | | Nº 243 |
| | Long-tailed | N. S. | 244 |
| | Brown | | 245 |
| XX. WALRUS | Arctic | | Nº 263 |
| XXI. SEAL | Common | <i>Eur.</i> | 265 |
| | Great | <i>Eur.</i> | 266 |
| | Rough | N. S. | 267 |
| | Hooded | N. S. | 268 |
| | Harp | N. S. | 269 |
| | Little | N. S. | 270 |
| | Ursine | | 271 |
| | Leoline | | 272 |
| XXII. MANATI | Manati | | 273 |
| XXIII. BAT | New York | N. S. | 283 |
| | Long haired | N. S. | p. 367 |

CLASS II. BIRDS.

DIV. I. LAND BIRDS.

SECT. I. RAPACIOUS.

| | | |
|-------------|---------------------------------|-------------------------------|
| I. VULTURE. | Carrion. V. aura. 122. C. I. 6. | |
| II. FALCON | Bald Eagle | F. leucocephalus. C. I. 1. |
| | Sea | F. ossifragus. in exhibitions |
| | Ringtail | F. Fulvus. Edw. I. |
| | Black-bellied | N. S. |
| | White | Du Pratz, II. 75. |
| | Osprey | F. Haliaëtus. C. I. 2. |

Gentil

| | |
|---------------|--------------------------------|
| Gentil Falcon | F. gentilis Mr. B |
| Goshawk | F. palumbarius. <i>Lawson</i> |
| Ashcoloured | <i>Edw.</i> 53. |
| Sacre | <i>Mr. B. de Buffon</i> |
| Winter | N. S. <i>Mus. Bl.</i> |
| Dusky | <i>Edw.</i> 3. 4. |
| Rough-footed | N. S. <i>Mr. B.</i> |
| Chocolate | N. S. <i>do.</i> |
| Marsh | <i>Edw.</i> 291. |
| Buzzard | F. Buteo. <i>Mr. B.</i> |
| White-rump'd | F. Hudsonius. <i>Edw.</i> 107. |
| Fork-tail | F. furcatus. C. I. 4. |
| Pigeon | F. columbarius. C. I. 3. |
| Little | F. sparverius. C. I. 5. |

III. OWL

| | | |
|-------------|---|----------------------------|
| | * | |
| Great | | <i>Strix bubo. Edw.</i> 60 |
| Short-eared | | <i>Br. Zool. Mus. Bl.</i> |
| Red | | <i>St. Asio C. I.</i> 7. |
| Mottled | | N. S. <i>Mus. Bl.</i> |

| | | |
|---------|-----|----------------------------|
| | * * | |
| Snowy | | <i>St. nyctea. Edw.</i> 61 |
| Barred | | N. S. <i>Mus. Bl.</i> |
| Canada | | <i>Br. I.</i> 518. |
| Brown | | <i>Br. Zool. Mr. B.</i> |
| White | | <i>ib.</i> |
| Hawk | | <i>Edw.</i> 62. |
| Little. | | <i>Mus. Bl. Br. Zool.</i> |

IV. SHRIKE

| | |
|------------|----------------------------------|
| Cinereous. | <i>Lanius excubitor. C. app.</i> |
| Crested. | <i>L. Canadensis</i> |
| Louisiane. | <i>Pl. enl.</i> 397. |

S E C T. II. P I E S.

V. PARROT

| | |
|-----------|---|
| Caroline. | <i>Psittacus Carolinensis. C. I.</i> 11. |
| Illinois. | <i>Ps. pertinax. Edw.</i> 234. <i>Br.</i> |

VI. CROW

| | |
|-----------|--------------------------------|
| Raven. | <i>Br. Zool. Mr. B.</i> |
| Carrion. | <i>B. Zool. Mus. Bl.</i> |
| Magpie | <i>Er. Zool. Edw.</i> p. 126. |
| Cinereous | <i>C. Canadensis</i> |
| Blue. | <i>C. cristatus. C. I.</i> 15. |

VII.

| | | | |
|-----------------|----------------|-----------------------------------|------------|
| VII. ORIOLE | Redwing | Oriolus Phœniceus. | C. I. 13 |
| | Baltimore | O. Baltimorus | 48 |
| | Spurious | O. Spurius | 49 |
| | Brown-headed | N. S. <i>Mr Kuckahn</i> | |
| VIII. GRACULE | Shining | Gracula quiscula | C. I. 12 |
| IX. CUCKOO | Caroline | Cutulus Americanus. | C. I. 9. |
| X. WOODPECKER | White-billed. | Picus principalis | C. I. 16 |
| | Buff-cheeked | P. pileatus | C. I. 17 |
| | Gold-wing | P. auratus | 18 |
| | Scarlet | P. erythrocephalus | 20 |
| | Red-bellied | P. Carolinus | 19 |
| | Spotted | Br. Zool. I. 178. <i>Mus. Bl.</i> | |
| | Hairy | P. villosus | 19 |
| | Yellow-bellied | P. varius | 21 |
| | Little | P. pubescens | <i>ib.</i> |
| | Black | <i>Albin</i> | |
| XI. NUTHATCH. | Greater | Br. Zool. | 22 |
| | Lesser | | <i>ib.</i> |
| | Canada | Br. III. 593 | |
| XII. KINGFISHER | Great | Alcedo alcyon | 69 |
| | Louisiane | Pratz. II. 82 | |
| XIII. CREEPER | Bahama | Certhia flaveola | 59 |
| | Common | Br. Zool. <i>Mus. Bl.</i> | |
| XIV. HUMMER | Red-throated | Trochilus colubris | C. I. 65 |

S E C T. III. GALLINACEOUS.

| | | | |
|------------|-------------|----------------------|---------------|
| XV. TURKY | Wild | Meleagris Gallopavo. | |
| XVI. GROUS | | | † |
| | Ruffed | Tetrao umbellus | Edw. 248 |
| | Pinnated | T. cupido | C. III. 1. |
| | Long-tailed | T. Phasianellus | Edw. 117 |
| | Spotted | T. Canadensis | Edw. 71, III. |
| | White | T. Lagopus | Edw. 72 |
| | | | † † |
| | Partridge | T. Virginianus | C. III. 12 |
| | Quail ? | T. Mexicanus | |

S E C T.

S E C T. IV. COLUMBINE.

| | | | |
|--------------|---------------|---------------------------|----------|
| XVII. PIGEON | Passenger | <i>Columba migratoria</i> | C. I. 23 |
| | Caroline | <i>C. Carolinensis</i> | 24 |
| | White-crowned | <i>C. leucocephala</i> | 25 |
| | Canada | <i>C. canadensis</i> | |
| | Ground | <i>C. Passerina</i> | 24 |

S E C T. V. PASSERINE.

| | | | |
|---------------|----------------|-------------------------------|-----------------|
| XVIII. THRUSH | Mimic | <i>Turdus polyglottos</i> | 27 |
| | Ferruginous | <i>T. rufus</i> | 28 |
| | Fieldfare | <i>T. migratorius</i> | 29 |
| | Red-leg'd | <i>T. plumbeus</i> | 30 |
| | Black | <i>Br. II.</i> | 245 |
| | Little | <i>Edw. 296</i> | C. I. 31 |
| | Golden-crowned | <i>Motacilla auro-capilla</i> | <i>Edw. 252</i> |

| | | | |
|------------|----------|-----------------------|----------|
| XIX. STARE | Crescent | <i>Alauda magna</i> | C. I. 33 |
| | New York | <i>N. S. Mus. Bl.</i> | |

| | | | |
|---------------|-------|--------------------------|-----------------------|
| XX. CHATTERER | Prib. | <i>Ampelis garrulus.</i> | C. I. 46. <i>Edw.</i> |
|---------------|-------|--------------------------|-----------------------|

| | | | |
|----------------|------------|--------------------------|----------------------|
| XXI. GROSBEAK. | Crossbill | <i>Br. Zool.</i> | <i>Edw. 303</i> |
| | Pine | <i>Br. Zool. IV.</i> | <i>Edw. 123, 124</i> |
| | Crested | <i>Loxia cardinalis</i> | C. I. 38 |
| | Mexican | <i>L. Mexicana</i> | <i>Mus. Bl.</i> |
| | Roseate | <i>L. Ludoviciana</i> | |
| | Spotted | <i>N. S. Mus. Bl.</i> | |
| | Missisipi | | |
| | Dominican | <i>L. Dominicana</i> | |
| | Canada | <i>L. Canadensis</i> | |
| | Black | <i>L. nigra</i> | C. I. 68 |
| | Blue | <i>L. caerulea</i> | 39 |
| | Violet | <i>L. violacea</i> | 40 |
| | Fantail | <i>Pl. enl.</i> | 380 |
| | Grey | <i>Pl. enl.</i> | 393 |
| | Red-headed | <i>N. S. Mr. Kuckahn</i> | |

| | | | |
|---------------|--------|-------------------------|--------------------------------------|
| XXII. BUNTING | Snow | <i>Emberiza nivalis</i> | <i>Edw. 126</i> |
| | Winter | <i>E. hyemalis</i> | C. I. 36 |
| | Rice | <i>E. oryzivora</i> | C. I. 14. <i>Edw. 291</i> Painted |

| | | | | |
|------------------|-------------------|---------------------------|--------------------|-----|
| | Painted | E. Ciris C. 44 | Edw. 130. 273 | |
| | Louisiane | E. Ludoviciana. | | |
| | Blue ? | Br. III. | | 298 |
| XXIII. TANAGRÉ | Blue | Tanagra cyanea | C. I. 45 | |
| | Green | Motacilla guira | Edw. 351. Mus. Bl. | |
| | Bishop | T. Episcopus. | Du Pratz. II. 94 | |
| | Red | T. rubra | C. I. 56 | |
| XXIV. FINCH | Towhe | Fringilla Erythrophthalma | | 34 |
| | Golden | Fr. tristis | | 43 |
| | Orange | Fr. zena | | 42 |
| | Mountain | Fr. montana | Edw. 269 | |
| | Little | C. I. 35 | | |
| | Cow-pen | | 34 | |
| | Bahama | Fr. bicolor | 37 | |
| | Caroline | Pl. en. 181. 223 ? | | |
| | White-throated | Edw. 304 | | |
| | Ferruginous | Edw. 354. Br. III. | 296 | |
| | Crimson head | N. S. Mus. Bl. | | |
| | Fasciated | N. S. Do. | | |
| | Greater red-poll. | Br. Zool. Mus. Bl. | | |
| XXV. FLY-CATCHER | Tyrant | Lanius tyrannus | C. I. 55 | |
| | Fork tail | Muscicapa tyrannus | | |
| | Chattering | C. I. 50 | | |
| | Crested | Musc. crinita | C. I. 52 | |
| | Black-cap | C. I. 53 | | |
| | Cinereous | Musc. virens | | |
| | Red-eyed | M. olivacea | C. I. 54 | |
| | Cat | M. Carolinensis | 66 | |
| | Canada | M. Canadensis | | |
| | Blue | Motacilla sialis | C. I. 47 | |
| | Brown | C. I. 54 | | |
| XXVI. LARK | Shore | Alauda alpestris | C. I. 32 | |
| | Red | Br. Zool | Edw. 297 | |
| | Calandre | Edw. 268 | | |
| XXVII. WAGTAIL | Redstart | Muscicapa ruticilla. | C. I. 67 | |
| | Yellow breast | Turdus trichas. | Edw. 237 | |
| | Black throat | Motacilla Canadensis. | Edw. 252 | |
| | Yellow throat. | C. I. 62. | | |
| | Yellow rump. | Edw. 255 | | |
| | | | | Red |

| | |
|-----------------|----------------------------------|
| Red poll | <i>M. petechia.</i> Edw. 256 |
| Black poll | |
| Pine | <i>Certhia pinus.</i> C. I. 61. |
| Crowned | <i>M. coronata.</i> Edw. 298 |
| Golden wing | <i>M. chrysoptera.</i> Edw. 299 |
| Green | Edw. 300 |
| Pied | Edw. <i>ib.</i> <i>M. varia</i> |
| Bloody-side | <i>M. Pensylvanica.</i> Edw. 301 |
| Cærulean | <i>M. cærulea.</i> Edw. 302 |
| Worm-eater. | Edw. 305 |
| Yellow | <i>Br. III.</i> 492 |
| Louisiane | 500 |
| Great | 508 |
| Quebec | <i>M. Icterocephala</i> |
| Yellow-tailed ? | Edw. 257 |
| Spotted | Edw. 257 |
| Cinereous | <i>Br. III.</i> 524 |
| Olive | <i>Pl. enl.</i> 58 |
| Ruby-crowned | <i>M. calendula.</i> Edw. 254 |
| Golden-crested. | <i>Br. Zool. C. App.</i> |
| Yellow | <i>Br. Zool. II.</i> 266. Edw. |
| Wren | <i>Mus. Bl.</i> |

| | | |
|------------------|-----------|---------------------------------|
| XXVIII. TITMOUSE | Crested | <i>Parus bicolor.</i> C. I. 57 |
| | Hooded | C. I. 60 |
| | Virginian | <i>P. Virginianus.</i> C. I. 58 |
| | American | <i>P. Americanus</i> 64 |
| | Canada | <i>Br. III.</i> 553. |
| | Colemouse | <i>Br. Zool. Mr. B.</i> |

| | | |
|---------------|-----------|-----------------------------------|
| XXIX. SWALLOW | Houfe | <i>Br. Zool. Mr. B.</i> |
| | Martin] | <i>ib. Mus. Bl.</i> |
| | Sand | <i>ib. C. App.</i> |
| | Swift | <i>ib. Lawson</i> |
| | Purple | <i>Hirundo purpurea.</i> C. I. 51 |
| | Canada | <i>H. subis.</i> Edw. 120 |
| | Aculeated | <i>H. pelagica.</i> C. III. 8 |

| | | |
|------------------|--------|---------------------------------|
| XXX. GOATSUCKER. | Common | <i>Br. Zool. C. I. 8</i> |
| | Lesser | <i>Capr. minor.</i> C. III. 16. |

DIV. II. WATER FOWL.

SECT. VI. CLOVEN-FOOTED.

*

XXXI. HERON.

Hooping
Canada
Brown

Ardea Americanus. C. I. 75
A. Canadensis. Edw. 133
A. Herodias. Edw. 136

* *

Common
Violet
Blue
Cinereous
Great white
Little white
Green
Bittern
Minute
Caroline
Green head

Br. Zool. C. App.
A. violacea. C. I. 79
A. cœrulea 76
Edw. 135
A. alba. *Mus. Bl.*
A. æquinoctialis. C. I. 77
A. virens. 80
A. Hudsonias. *Edw.* 135
Br. Zool. Mus. Bl.
C. I. 78
Mr. Kuckahn

XXXII. IBIS

Wood
Scarlet
White
Brown

Tantalus loculator. C. I. 81
T. ruber 84
T. albus 82
T. fuscus 83

XXXIII. CURLEW

Elkimaux

N. S. Mr. B.

XXXIV. WOODCOCK.

American
Snipe
Jack
Godwit
Red
Great
Nodding
Spotted

Mus. Bl.
Br. Zool. Mus. Bl.
ib. Mus. Bl.
ib. C. App.
ib. Edw. 138
Scolopax fedoa. *Edw.* 137
N. S. Mr. B.
Mus. Bl.

XXXV. SAND-PIPER

Turnstone
Common
Spotted
Cinereous

Tringa interpres *Edw.* 141
Br. Zool. Mr. Kuckahn
ib. Edw. 270
ib. Mr. B.

Knot

| | |
|----------|-----------------------|
| Knot | <i>ib. Edw. 276</i> |
| Redshank | <i>ib. C. App.</i> |
| Grey Pl. | <i>ib. C. App.</i> |
| Purre | <i>ib. Mus. Dl.</i> |
| Little | N. S. |
| Glossy | Mr. B. N. S. |
| Green | Br. Zool. Mr. Kuckahn |

| | | |
|---------------|------------|--------------------------------|
| XXXVI. PLOVER | Green | Br. Zool. Mus. Bl. |
| | Pie | <i>ib. C. I. 85</i> |
| | Noify | Charadrius vociferus. C. I. 71 |
| | Golden | Ch. apricarius Edw. 140 |
| | Lark | Br. Zool. Mus. Bl. |
| | Sanderling | <i>ib. Mus. Bl.</i> |

| | | |
|--------------|--------------|----------|
| XXXVII. RAIL | Clapper | Mus. Bl. |
| | Red-breasted | Edw. 279 |

| | | |
|------------------------|----------|-----------------------------|
| XXXVIII. WATER- HEN | Caroline | Rallus Carolinus. Edw. 144. |
| | Common | C. I. 70. |
| | | Br. Zool. Mus. Bl. |

S E C T. VII. With PINNATED FEET.

| | | |
|-------------|--------|--------------------|
| XXXIX. COOT | Common | Br. Zool. Mus. Bl. |
|-------------|--------|--------------------|

| | | |
|---------------|-------|---------------------|
| XL. PHALAROPE | Grey | <i>ib. Edw. 308</i> |
| | Red. | Edw. 142 |
| | Brown | Edw. 46 |

| | | |
|-------------|-----------|-----------|
| XLI. GREBE, | Eared | Edw. 96 |
| | Pied bill | C. I. 91, |

S E C T. VIII. WEBBED-FOOTED.

| | | |
|------------------|-----|-------------------------------|
| * XLII. FLAMMANT | Red | Phænicopterus ruber. C. I. 73 |
|------------------|-----|-------------------------------|

| | | |
|------------|-----------|---------------------|
| XLIII. AUK | Great | Br. Zool. Edw. 147 |
| | Razor | <i>ib. Edw. 358</i> |
| | Puffin | <i>ib. Edw. ib.</i> |
| | New | N. S. Br. Mus. |
| | Little | Br. Zool. Edw. 91 |
| | Guillemot | <i>ib. Edw. 359</i> |
| | Black | <i>ib.</i> |

XLIV.

| | | |
|-----------------|---|---|
| XLIV. DIVER | Northern Immer Speckled Lumme | <i>Br. Zool. Mus. Bl.</i> <i>Colymbus Immer. Mus. Bl.</i> <i>Br. Zool. Mus. Bl.</i> <i>ib. Edw. 97. 146</i> |
| XLV. CUT-WATER | Black | <i>Rhynchops nigra. C. I. 90</i> |
| XLVI. TERN | Noddy Black Greater Lesser | <i>Sterna stolidus. C. I. 88</i> <i>Br. Zool. Kalm</i> <i>ib. Mus. Bl.</i> <i>ib. Mus. Bl.</i> |
| XLVII. GULL | Great Wagel Herring Kittiwake Laughing Black toed Arctic | <i>ib. Mr. B.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib. Edw. 148, 149.</i> |
| XLVIII. PETREL | Fulmar Shear water Storm | <i>ib.</i> <i>ib. Edw. 359</i> <i>ib. Edw. 91</i> |
| XLIX. SAW-BILL. | Goosander Redbreasted Hooded Smew | <i>Br. Zool. Mus. Bl.</i> <i>ib. Edw. 95.</i> <i>Mergus cucullatus. Edw. 360</i> <i>Br. Zool. Mus. Bl.</i> |
| L. DUCK | Swan Canada Wild-goose White-fronted Blue Bernacle Brant Snow Eider King Velvet Black Shoveler Golden eye Harlequin | <i>ib. Edw. 150</i> <i>Anas Canadensis. Edw. 151</i> <i>Br. Zool.</i> <i>ib. Edw. 153</i> <i>A. caerulescens, Edw. 152</i> <i>Br. Zool.</i> <i>ib.</i> <i>Anser niveus. Br. VI. Lawson</i> <i>Br. Zool. Edw. 98</i> <i>A. spectabilis. Edw. 154</i> <i>Br. Zool. Mus. Bl.</i> <i>A. perspicillata. Edw. 155</i> <i>Br. Zool. C. I. 96. fam.</i> <i>ib. Mus. Bl.</i> <i>A. histrionica. C. I. 98. fam.</i> <i>[Edw. 99. 157.</i> <i>Pied</i> |

| | |
|--------------|---|
| Pied | <i>A. albeola.</i> <i>Edw.</i> 100 |
| Pochard | <i>Br. Zool.</i> <i>C. App.</i> |
| Pin-tail | <i>ib.</i> <i>Mus. Bl.</i> |
| Swallow-tail | <i>ib.</i> <i>Edw.</i> 280 |
| Buffel | <i>A. Bucephala.</i> <i>C. I.</i> 95 |
| White-faced | <i>A. discors.</i> <i>C. I.</i> 100 |
| Ilathera | <i>A. Bahamensis.</i> <i>C. I.</i> 93 |
| Brown | <i>Mr. B.</i> |
| Summer | <i>A. sponfa.</i> <i>Edw.</i> 101. <i>C. I.</i> 97. |
| Widgeon | <i>Br. Zool.</i> <i>Mus. Bl.</i> |
| Teal | <i>ib.</i> <i>Mr. B.</i> |
| Blue-wing | <i>C. I.</i> 99. |
| Mallard | <i>Br. Zool.</i> <i>C. App.</i> |
| Scaup | <i>ib.</i> <i>Mus. Bl.</i> |
| LI. PELECAN | |
| Pelecan | <i>Edw.</i> 93. |
| Corvorant | <i>Br. Zool.</i> <i>Mus. Bl.</i> |
| Shag | <i>ib.</i> <i>C. App.</i> |
| Gannet | <i>Mr. B.</i> <i>Br. Zool.</i> |

CLASS III. REPTILES.

SECT. I. With FOUR FEET.

| | | | |
|-------------|-------------|-------------------------|------------------|
| I. TORTOISE | Green | <i>Testudo Mydas</i> | <i>C. II.</i> 38 |
| | Hawksbill | <i>T. caretta</i> | 39 |
| | Logger-head | | 40 |
| | Trunk | | |
| | Chequered | <i>T. Carolina.</i> | <i>Edw.</i> 205 |
| | Mud | | <i>Edw.</i> 287 |
| | Rough ? | <i>T. scabra</i> | |
| | Indented ? | <i>T. denticulata</i> | |
| | River | <i>N. S. Dr. Garden</i> | |
| II. FROG | Bull | <i>Rana ocellata.</i> | <i>C. II.</i> 72 |
| | Land | | <i>C.</i> 69 |
| | Water | | <i>C.</i> 70 |
| | | <i>B</i> | Green |

| | | | |
|-------------|-----------|----------------------------|-----------|
| | Green | | C. 71 |
| | Horned | <i>R. cornuta</i> | |
| | Striped | <i>N. S. Mr. Ellis</i> | |
| III. LIZARD | Allegator | <i>Lacerta Crocodylus.</i> | C. II. 63 |
| | Lion | <i>L. sex-lineata</i> | 68 |
| | Guano | <i>L. Iguana</i> | 64 |
| | Green | | 65 |
| | Blue-tail | <i>L. fasciata</i> | 67 |
| | Spotted | <i>L. punctata</i> | III. 10 |
| | Canada | <i>N. S. Mr. Ellis</i> | |
| | Annulated | <i>Muf. Bl.</i> | |

S E C T. II. With Two FEET.

| | | | |
|-----------|----------|---------------------------------|----------|
| IV. SIREN | Caroline | <i>Siren Lacertina. Ph. Tr.</i> | LVI. 189 |
|-----------|----------|---------------------------------|----------|

S E C T. III. Without FEET.

| | | | |
|----------|---------------|--------------------------|-----------|
| V. SNAKE | † | <i>Crotalus horridus</i> | C. II. 41 |
| | Rattle | <i>Cr. miliarius</i> | C. 4 |
| | Lesser | <i>Cr. Durissus</i> | |
| | Chequered | | |
| | † † | | |
| | Hog-nose | <i>Boa contortrix</i> | C. 56 |
| | † † † | | |
| | Striped | <i>Coluber leberis</i> | |
| | Wampum | <i>Coluber fasciatus</i> | C. 58 |
| | Green | <i>C. ordinatus</i> | 53 |
| | Chain | <i>C. getulus</i> | 52 |
| | Ribbon | <i>C. saurita</i> | 50 |
| | Black | <i>C. constrictor</i> | 48 |
| | Bead | <i>C. guttatus</i> | 60 |
| | Familiar | <i>C. æstivus</i> | 57 |
| | Porraceous | <i>C. mycterizans</i> | 47 |
| | Crossed | <i>Coluber fimus</i> | |
| | Smooth-headed | <i>friatulus</i> | |
| | Dotted | <i>punctatus</i> | |
| | Ringed | <i>doliatus</i> | |
| | Brown | <i>fipidon</i> | |
| | Yellow | <i>fulvius</i> | |
| | Vittated | <i>firtalis</i> | |
| | | | Water |

(19)

| | | |
|-----------------|--------------------------|-----------|
| Water viper | | C. 43 |
| Black viper | | 44 |
| Brown viper | | 45 |
| Copper-bellied | | 46 |
| Brown-bead | | 49 |
| Speckled | | 51 |
| Penfacola | N. S. Mr. Ellis | |
| Coach-whip | C. 54 | |
| Corn | C. 55. | |
| little | Edw. 349 | |
| | † | |
| | † † † | |
| Glaſs | Anguis ventralis | C. II. 59 |
| | † † | |
| | † † † | |
| Little Sloeworm | Cœcilia N. S. Mr. Ellis. | |

CLASS IV. FISH.

SECT. I. CETACEOUS.

| | | |
|---------------|---------------|----------|
| I. NARWHAL | Narwhal | |
| II. WHALE | Common | Br. Zool |
| | Pike-headed ? | ib. |
| | Fin | ib. |
| | Beaked | ib. |
| III. CACHALOT | Blunt-headed | ib. |
| | High-finned | ib. |
| IV. DOLPHIN | Porpeſſe | ib. |
| | Grampus | |

SECT. II. CARTILAGINOUS.

| | | |
|------------|--------|-------------------|
| V. LAMPREY | Common | Br. Zool. G. App. |
|------------|--------|-------------------|

| | | | |
|--------------------|-------------|-------------------------|------------------|
| VI. RAY | Thorn-back | <i>C. App.</i> | |
| | Sting | <i>C. App.</i> | |
| | Devil-fish | <i>C. App.</i> | |
| VII. SHARK | White ? | <i>C. App.</i> | |
| | Saw | <i>Squalus Pristis.</i> | <i>C. App.</i> |
| VIII. FISHING FROG | Common | <i>Br. Zool.</i> | <i>C. App.</i> |
| IX. STURGEON | European | <i>ib.</i> | |
| | Blunt-nosed | <i>Mus. Bl.</i> | |
| X. BALISTES | Unicorn | <i>B. monoceros.</i> | <i>C. II. 19</i> |
| | Hispid | <i>B. hispidus</i> | |
| | Old | <i>B. vetula.</i> | <i>C. II. 22</i> |
| XI. TETRODON | Smooth | <i>T. lævigatus</i> | |
| | Globe | <i>T. lagocephalus</i> | <i>C. II. 28</i> |
| | Sun | <i>Br. Zool.</i> | <i>C. App.</i> |
| XII. LUMP | Lump-fish | <i>Br. Zool.</i> | |
| XIII. PIPE-FISH | Shorter | <i>ib.</i> | |

S E C T. III. BONY.

| | | | |
|----------------|------------|-------------------------|----------------------|
| XIV. EEL | | * APODAL. | |
| | Muray | <i>Muræna Helena.</i> | <i>C. II. 20. 21</i> |
| | Eel | <i>Br. Zool.</i> | |
| | Conger | <i>ib.</i> | |
| XV. SWORD | Sword-fish | <i>ib.</i> | |
| XVI. COD | | * * JUGULAR | |
| | Common | <i>ib.</i> | |
| | Frost | <i>Gadus callarias.</i> | <i>Mus. Bl.</i> |
| | Tau | <i>Gadus Tau.</i> | |
| XVII. BLENNY | pustulated | <i>N. S. Mr. B.</i> | |
| XVIII. REMORA | | * * * THORACIC. | |
| | Remora | <i>Ech. neucrates.</i> | <i>C. II. 26</i> |
| XIX. CORYPHÆNE | Parrot | <i>C. Pſittacus</i> | <i>C. II. 29</i> |
| | Blue | <i>C. II. 18</i> | |
| | Lineated | <i>C. lineata</i> | |
| | | | XX. BULL- |

| | | | |
|-----------------|----------------|------------------------------|--------------------------|
| XX. BULL-HEAD | Father-lasher | <i>Br. Zool.</i> | |
| XXI. FLOUNDER | Holibut | <i>Br. Zool.</i> | |
| | Flounder | <i>ib.</i> | |
| | Plaife | <i>ib.</i> | |
| | Rough | <i>Pleuronectes plagiufa</i> | |
| | Sole | <i>Br. Zool.</i> | |
| | Lineated | <i>Pl. lineatus</i> | |
| | Lunated | <i>Pl. lunata</i> | C. II. 27 |
| XXII. CHÆTODON | Scaleless | <i>Ch. alepidotus</i> | |
| | Angel | <i>Ch. triostegus</i> | C. II. 31 |
| XXIII. GILTHEAD | Lane-snapper | <i>Sparus synagris</i> | C. II. 17 |
| | Pork-fish | <i>Sp. rhomboides</i> | C. II. 4 |
| | Porgy | <i>Sp. chrysops</i> | C. II. 16 |
| | Silver | <i>Sp. argyrops.</i> | |
| | Radiated | <i>Sp. radiatus.</i> | C. II. 12 |
| | Virginian | <i>Sp. virginicus</i> | |
| XXIV. WRASSE | Mutton | <i>Labrus anthias</i> | C. II. 25 |
| | Mangrove | <i>L. griseus</i> | C. II. 9 |
| | Hog | <i>L. flavus</i> | C. II. 11 |
| | Gaper | <i>L. hiatula</i> | |
| | Drum | <i>L. chromis</i> | C. App. XXXIII. |
| | Yellow | <i>L. fulvus</i> | C. II. 10 |
| | Cinereous | | C. II. 11. <i>fig. 2</i> |
| | Bone | | C. II. 13 |
| | Great ? | | C. II. 15 |
| XXV. PERCH | River ? | <i>Br. Zool. C. App.</i> | |
| | Yellow-bellied | <i>Labrus auritus.</i> | C. II. 8 |
| | Dotted | <i>Perca punctata</i> | |
| | Whiting ? | <i>P. alburnus.</i> | C. II. 12 |
| | Croker | <i>P. undulata</i> | C. II. 3. |
| | Eyed | <i>P. ocellata</i> | |
| | Noble | <i>P. nobilis</i> | |
| | Philadelphian | <i>P. Philadelphica</i> | |
| | Black | <i>P. atraria</i> | |
| | Margate | <i>P. chrysop'era</i> | C. II. 2 |
| | Negro | <i>P. punctata</i> | C. II. 7 |
| | Hind | <i>P. guttata</i> | C. II. 14 |
| | Venenous | <i>P. venenosa</i> | C. II. 5 |
| | Black-tail | <i>P. melanura</i> | C. II. 7 |
| | | B 3 | Rudder |

| | | |
|--------------------|-------------|---|
| | Rudder | <i>P. fectatrix</i> C. II. 8 |
| | Striated | <i>P. striata</i> |
| | Grunt | <i>P. formosa</i> C. II. 6 |
| | Trifurcated | <i>P. trifurca</i> |
| | Bafs ? | <i>Br. Zool. C. App. XXXIII.</i> |
| | Apodal | C. II. 4. |
| XXVI. STICKLE-BACK | Crevalle | <i>Gasterosteus Carolinus</i> |
| | Canada | <i>G. Canadus</i> |
| | Skip-Jack | <i>G. Saltatrix.</i> C. II. 14 |
| | Two-spined | <i>Mus. Bl.</i> |
| XXVII. MACKREL | Yellow-tail | <i>Scomber Hippos</i> |
| XXVIII. GURNARD | Flying | <i>Trigla evolans</i> |
| | Rough | N. S. <i>Mus. Bl.</i> |
| | * * * * | |
| | | ABDOMINAL. |
| XXIX. LOCH | Beardless | <i>Cobitis heteroclita</i> |
| XXX. AMIA | Mud-fish | <i>Amia calva</i> |
| XXXI. SILURE | Cat | <i>Silurus felis, S. catus.</i> C. II. |
| | Armed | ²³ <i>S. cataphractus.</i> C. III. 19 |
| XXXII. TROUT | Salmon | <i>Br. Zool.</i> |
| | Trout | <i>Br. Zool. Mr. B.</i> |
| | White fish | <i>Salmo lavarettus ?</i> |
| | Long | <i>S. fœtens.</i> C. II. 2 |
| XXXIII. PIKE | Fox | <i>Efox vulpes.</i> C. II. 1 |
| | Green | <i>E. Osseus.</i> C. II. 30 |
| | Sea-needle | <i>Br. Zool</i> |
| | Under-jaw | <i>E. Brasiliensis. Mr. B.</i> |
| | Barracuda | C. II. 1 |
| | Common | <i>Br. Zool. C. App.</i> |
| XXXIV. ELOPS | Forked | <i>El. Saurus</i> |
| XXXV. ARGENTINE | Caroline | <i>Arg. Carolina.</i> C. II. 24 * |

* Perhaps a herring.

XXXVI.

| | | |
|-------------------|--|---|
| XXXVI. ATHERINE | Silver-fish | Ath. menidia |
| XXXVII. MULLET | White Common | Mugil albula. C. II. 6 <i>Br. Zool. C. App.</i> |
| XXXVIII. POLYNEME | Virginian | P. Virginicus |
| XXXIX. HERRING | Common Shad | <i>Br. Zool.</i> <i>ib. C. App. XXXII</i> |
| XL. CARP. | Common Roach Dace Mummy-Chog. | <i>Br. Zool. C. App.</i> <i>ib. ib.</i> <i>ib. ib.</i> <i>N. S. Mus. Bl.</i> |

CLASS V. INSECTS.

SECT. I. BEETLES.

| | | |
|-----------|-----------|--------------------------|
| | | * |
| I. CHAFER | Scarabæus | lunaris. <i>Mus. Bl.</i> |
| | | aloëus |
| | | lancifer |
| | | nasicornis |
| | | Carolinus |
| | | mimas |
| | | carnifex |
| | | nuchicornis |
| | | Marianus |
| | | stercorarius |
| | | Amazonus |
| | | Surinamus |
| | | nitidus |
| | | fepicola |
| | | horticola, a variety |
| | | occidentalis |
| | | lanigerus |
| | | fasciatus |
| | | Indus |
| | | brunnus |
| | | punctatus |

| | | |
|--------------------|-----------|---|
| | | nobilis |
| | | quadrimaculatus |
| | | Hudsonias. <i>Drury</i> t. 35. f. 7 N. |
| | | S. <i>Mus. Bl.</i> |
| | | rufus. N. S. <i>Mus. Bl.</i> |
| | | lævipes. N. S. <i>Mus. Bl.</i> |
| | | piceus. N. S. <i>Mus. Bl.</i> |
| | | biunguiculatus. N. S. <i>Mus. Bl.</i> |
| | | pilosus. N. S. <i>Mus. Bl.</i> |
| | | testaceus. N. S. <i>Mus. Bl.</i> |
| II. STAG-BEETLE | Lucanus | cervus |
| | | capreolus |
| | | interruptus |
| | | — — — N. B. a brown variety |
| III. LEATHER-EATER | Dermestes | lardarius |
| | | capucinus |
| | | typographus |
| | | fasciatus. N. S. <i>Mus. Bl.</i> |
| IV. MIMICK-BEETLE | Hister | unicolor |
| V. WHIRL-BEETLE | Gyrinus | Americanus |
| VI. CARRION-BEETLE | Silpha | vespillo. N. B. a great variety, and the small one too |
| | | noveboracensis. N. S. <i>Mus. Bl.</i> |
| | | bipustulata |
| | | quadripustulata |
| | | Americana |
| | | obscura |
| | | aquatica |
| VII. WEEVIL | Curculio | noveboracensis. N. S. <i>Mus. Bl.</i> |
| | | palmarum |
| | | Bacchus |
| | | dispar |
| | | anchoraco |
| | | nucum |
| | | incanus |
| | | scutellatus. N. S. <i>Mus. Bl.</i> |
| VIII. NUT-BEETLE | Attelabus | curculionoides |
| | | Pensylvanicus. |
| | | IX. LADY- |

- | | | |
|------------------------------|--------------|---|
| IX. LADY-FLY | Coccinella | impunctata 7-punctata 13-punctata 2-pustulata |
| | * * | |
| X. GLOW-WORM | Lampyris | Pyrallis marginata pilosa. N. S. <i>Musf. Bl.</i> |
| XI. SEED-BEETLE | Bruchus Pisi | <i>Kalm I. 173—177</i> |
| XII. GOLDEN-HONEY- BEETLE | Chrysomela | 5-punctata occidentalis Boleti Philadelphica 3-maculata Americana lineola bicolor, variety with red thighs, <i>Musf. Bl.</i> scopolina obscura 10-maculata 12-punctata Phellandrii tomentosa Rhoi. N. S. <i>Musf. Bl.</i> spiniornis. N. S. <i>Musf. Bl.</i> lepturoides. N. S. <i>Musf. Bl.</i> lineato-punctata. N. S. <i>Musf. Bl.</i> trifurcata. N. S. <i>Musf. Bl.</i> laticlavata. N. S. <i>Musf. Bl.</i> fimbriata. N. S. <i>Musf. Bl.</i> frontalis. N. S. <i>Musf. Bl.</i> Hudsonias. N. S. <i>Musf. Bl.</i> |
| XIII. BLISTER-BEETLE | Meloë | vesicatorius majalis cinerea. N. S. <i>Musf. Bl.</i> |
| XIV. STINKING-BEETLE | Tenebrio | chalybeus Mauritanicus culinaris |

| | | |
|----------------------------|---------------------------|--|
| | | culinaris fossor |
| XV. TORTOISE-BEETLE | Cassida | viridis bipustula ? <i>Mus. Bl.</i> |
| | * * * | |
| XVI. GLOSSY-BEETLE | Cicindela | hybrida Germanica riparia |
| XVII. GROUND-BEETLE | Carabus | granulatus, γ . hortensis leucophthalmus inquisitor lividus, small variety marginatus crepitans Americanus cyanocephalus vulgaris piceus fericeus. N. S. <i>Mus. Bl.</i> fasciatus. N. S. <i>Mus. Bl.</i> |
| XVIII. BURN-COW | Buprestis | gigantea mariana chrysofigma Aultriaca |
| XIX. SPRING-BEETLE | Elatér | oculatus phosporeus ligneus ? obscurus |
| XX. WATER-BEETLE | Dytiscus | fuscipes marginatus |
| XXI. SOFTWINGED- BEETLE | Malacopteryx Cantharis | Americauus. N. S. <i>Mus. Bl.</i> tropica |
| XXII. WOOD-BEETLE | Leptura | mystica detrita |
| | | Robinia. |

- XXIII. CAPRICORN-BEETLE. *Cerambyx*
- Robiniæ. Drury. t. 41. f. 2.*
N. S. Musf. Bl.
Americana. N. S. Musf. Bl.
nitens
imbricornis
coriarius, variety
melanopus
lineatus
spinibarbis
araneiformis
4-maculatus
fuccinctus
fuaveolens
Coquus
hispidicornis. Drury. t. 41. f. 4.
rusticus
bajulus
tetraphthalmus. N. S. Musf. Bl.
brunnus. N. S. Musf. Bl.
palliatu. N. S. Musf. Bl.
clavipes. N. S. Musf. Bl.

- XXIV. ROVE-BEETLE *Staphylinus* *hirtus*
erythropterus
- XXV. CLIPT-WINGED BEETLE *Necydalis* *collaris. N. S. Musf. Bl.*
- XXVI. EARWIG *Forficula* *auricularia*

SECT. II. HALFWINGED INSECTS.

- XXVII. COCKROACH *Blatta* *Americana*
Orientalis
Germanica
livida. N. S. Musf. Bl.
- XXVIII. CAMELCRICKET *Mantis* *irrorata*
Carolina
- XXIX. LOCUST *Gryllus* *brevicornis*
gryllotalpa
campestris
citrifolius

| | | |
|----------------------|-----------|--|
| | | citrifolius laurifolius myrtifolius? succinctus cristatus Carolinus |
| XXX. FLEA-LOCUST | Cicada | squamigera tibicen septendecim violacea spumaria phalænoides Lanio carinata. N. S. <i>Muf. Bl.</i> guttata. N. S. <i>Muf. Bl.</i> coccinea. N. S. <i>Muf. Bl.</i> |
| XXXI. BOAT-FLY | Notonecta | glauca lineata. N. S. <i>Muf. Bl.</i> |
| XXXII. WATERSCORPION | Nepa | grandis |
| XXXIII. BUG | Cimex | lecticularis. <i>Kalm.</i> bidens ictericus floridanus hæmorrhous baccarum prasinus biguttatus, variety with red dots and marges cristatus trifasciatus succinctus lacustris |
| XXXIV. PLANTSUCKER | Chermes | Alni. <i>Kalm</i> |
| XXXV. COCHINEAL | Coccus | Caeti. <i>Bartram's Florida</i> |

S E C T. III. PAPILIONACEOUS. INSECTS.

| | | |
|-------------------|---------|---|
| XXXVI. BUTTERFLY | Papilio | <p>Troilus. <i>Drury. t. 11. f. 1—5?</i> Ajax. <i>Edw. 34.</i> Xuthus. <i>Drury. t. 22. f. 1. 2.</i> Antilochus Podalirius Protefilaus. <i>Drury. t. 22. f. 34.</i> Apollo. <i>Mus. Bl.</i> Brassicæ Hyale Eubule Ecclipsis Midamus Plexippus Misippus Chrysippus Canthus Almanæ Orithya Cardui Antiopa. <i>Kalm.</i> urticæ C. album. Atalanta Euphrosyne. <i>Kalm.</i> Cupido quercus Echion Virgaureæ Bixæ</p> |
| XXXVII. HAWK-MOTH | Sphinx | <p>ocellata Populi Carolina Celerio Pinastris fuciformis. <i>β. Tityus</i></p> |
| XXXVII. MOTHS | Phalæna | <p>Atlas Cecropia Paphia</p> |
| | | Luna |

Luna
 Virgo
 Plantaginis
 Chrysorrhoea
 lubricipeda
 paranympa
 Gamma
 Pfi
 bilineata
 viridana
 bella
 pulchella

SECT. IV. INSECTS with nervous Wings.

| | | |
|-------------------------|------------|--|
| XXXIX. DRAGON- FLY | Libellula | flaveola depressa ænea umbrata Americana Carolina |
| XL. CAMEL-FLY | Raphidia | cornuta |
| XLI. SPRING-FLY | Phryganea | bicaudata |
| XLII. PEARL-FLY | Hemerobius | pectinicornis |
| XLIII. SCORPION- FLY | Panorpa | communis |

SECT. V. INSECTS with Stings.

| | | |
|-----------|------|---|
| XLIV. BEE | Apis | cordata mellifica rostrata violacea Carolina pratorum æstuans noveboracensis N. S. <i>Mus. Bl.</i> vespiformis. N. S. <i>Mus. Bl.</i> fericea. N. S. <i>Mus. Bl.</i> |
|-----------|------|---|

| | | |
|---------------------------|-----------|--|
| XLV. ANT | Formica | herculeana rufa |
| XLVI. WASP | Vespa | Carolina maculata. <i>Mus. Bl.</i> annularis quadridens Canadensis |
| XLVII. GOLDEN WALL-FLY | | Chrysis cyanea |
| XLVIII. TAILED WASP | Sirex | Columba. <i>Mus. Bl.</i> |
| XLIX. SAW-FLY | Tenthredo | scrophulariæ lutea viridis |
| L. ICHNEUMON WASP | Sphex | fabulosa cœrulea Pennsylvanica arenaria |
| LI. ICHNEUMON- FLY | Ichneumon | luteus |
| LII. NAKED BEE | Mutilla | occidentalis |

SECT. VI. Two-winged INSECTS.

| | | |
|-----------------------|------------|---------------------------------------|
| LIII. GNAT | Culex | pipiens. <i>Musquito</i> pulicaris |
| LIV. WASP-FLY | Afilus | æstuans gibbosus |
| LV. FLOWER- BREEZE | Bombylius | minor. <i>Mus. Bl.</i> |
| LVI. HORSE-FLY | Hippobosca | hirundinis. <i>Mus. Bl.</i> |
| | | LVII. |

| | | |
|-----------|-------|--|
| LVII. FLY | Musca | illucens. Drury, t. 44. f. 1. <i>M. Bl.</i> leucopa vomitoria carnaria domestica |
|-----------|-------|--|

| | | |
|--------------|---------|-----------------------------------|
| LVIII. WHAME | Tabanus | Americanus. N. S. <i>Mus. Bl.</i> |
|--------------|---------|-----------------------------------|

| | | |
|-------------|---------|---------|
| LIX. GADFLY | Oestrus | Tarandi |
|-------------|---------|---------|

S E C T. VII. INSECTS without Wings

| | | |
|---------------|---------|------------|
| LX. SUGARMITE | Lepisma | saccharina |
|---------------|---------|------------|

| | | |
|----------------------|--------|----------|
| LXI. GROUND- FLEA | Podura | aquatica |
|----------------------|--------|----------|

| | | |
|-----------------------|--------|-------------|
| LXII. DEATH- WATCH | Termes | pulsatorium |
|-----------------------|--------|-------------|

| | | |
|--------------|-----------|---|
| LXIII. LOUSE | Pediculus | humanus ricinoides suis cervi meleagridis |
|--------------|-----------|---|

| | | |
|------------|-------|---------------------------------------|
| LXIV. FLEA | Pulex | irritans penetrans. <i>Chigger</i> |
|------------|-------|---------------------------------------|

| | | |
|-----------|--------|------------------------------------|
| LXV. TICK | Acarus | Americanus Siro holosericeus |
|-----------|--------|------------------------------------|

| | | |
|------------------------------|------------|--|
| LXVI. LONG- LEGGED SPIDER | Phalangium | groffipes opilio acaroides balænarum reniforme |
|------------------------------|------------|--|

| | | |
|---------------|--------|----------------------------------|
| LXVII. SPIDER | Aranca | diadema clavipes venatoria |
|---------------|--------|----------------------------------|

| | | |
|-----------------------|---------|--|
| LXVIII. SCOR- PION | Scorpio | Americanus australis. <i>Mus. Bl.</i> |
|-----------------------|---------|--|

LXIX.

- LXIX. CRABFISH. sentry Cancer pinnophylax
 minute C. minutus. *Kalm.*
 land C. ruficollis. *Cat. II. 32.*
 florid C. floridus
 Sand C. vocans. *Cat. II. 35.*
 common C. mænas. *Mr. B.*
 roughshelled C. granulatus. *Cat. II. 36. N° 2.*
 spider C. araneus. *Mr. B.*
 dotted C. punctatus
 rock C. Grapsus. *Cat. II. 36. N° 1.*
 redclawed *Cat. II. 37. f. 1.*
- LXX. LOBSTER. common Cancer Gammarus
 cynic C. Diogenes. *Cat. II. 33. f. 1. 2.*
 Soldier *Cat. II. 34*
 Cray C. carcinus
- LXXI. MONOCULE King's Crab Monoculus Polyphemus. *Mus. Bl.*
- LXXII. MILLEPEE Oniscus Oestrum. *Mus. Bl.*
 Physodes. *Mus. Bl.*
 Ceti
 Afellus
- LXXIII. CENTIPEE Scolopendra forficata
 morsitans. *Cat. II. 2.*
 occidentalis
 marina
- LXXIV. GALLYWORM Julus grassus

T E S T A C E O U S.

REFERENCES to American Shells, engraved in Lister's
Hist. Conch.

LAND N° 19

45

69

82

91

92

93

94

Sea Bivalves. N° 34. 279

196. 358

200. 434

277. 436

Sea turbinated. 855. a. 12

1058.—10

1059—2

4

RIVER

TURBINATED

3

4

5

6

7

8

35

44

45

46

River Bivalve

5

6

9

10

15

SHORT

SHORT DIRECTIONS

For LOVERS and PROMOTERS of NATURAL HISTORY,

In what manner Specimens of all Kinds may be collected, preserved, and transported to distant Countries.

I. **A**LL Quadrupeds of a great bulk must be skinned as soon as possible after death; the tail, claws, teeth, horns, ears, bristles on the nose and chin, are carefully to be preserved; the hair of the fur as little stained with blood as possible; the opening is to be as small as it can conveniently be without hindering the operation; the inside of the skin may then be washed or brushed over with a liquor, made of an ounce of Sal Ammoniac, dissolved in a quart of water, in which afterwards two ounces of corrosive sublimate Mercury must be put: or four ounces of Arsenic may be boiled in two quarts, or two quarts and a half of water, till all or the greater part of it be dissolved, and the liquor may serve for the same purpose to wash the inside of the skin: then the whole cavity must be stuffed with oakum or tow, likewise imbibed with the above liquor, afterwards dried and mixed

with a powder of four parts of Tobacco-sand, four parts of pounded black Pepper, one part of burnt Alum, and one part of corrosive Sublimate or Arsenic: lastly, the whole is to be sewed with a thread dipt in the above liquor, and the skin thus stuffed must be gently dried, and a day after put into an oven, whose heat must be so gentle, that some hair, or a feather put for trial's sake into it, will not more crisp, or curl, or bend; and thus it will be perfectly dried: the eyes may be filled up with putty, which, when dry, will look like the white part of an eye, and will bear painting, to express with oil-colours the iris and pupil of the natural eye of the animal in question. The whole animal can be put into a box, filled with tow or moss, or oakum steeped in the above liquor, and perfectly dried. The box can be brushed over on both sides with the above liquor, and dried; and the crevices shut up with pieces of paper pasted over; the paste must be made either with the arsenical liquor, or that made with corrosive sublimate instead of common water; and I can assure these precautions, though cheap and simple, will keep the animal in the best preservation on the longest voyages, and for many years in a collection. This way of preparing and securing the boxes for sending specimens abroad, the prepared oakum or tow, the powder and liquor mentioned above, are always to be understood when I afterwards speak of prepared boxes, prepared tow, moss, or oakum, and preparing powder or liquor.

II. Small Quadrupeds may be plunged into a keg of brandy, rack or rum, and thus sent over: observe however to put them first into the coarser kind of spirits; and after they have been therein for a while, and parted with some impurities, you must put them into another vessel with new clean rum or brandy, into which some alum may be put; and they will keep thus better, and be less subject to change or decay.

III. Birds must be opened at the vent, their entrails, lungs,

lungs, and craws taken out, washed with the above preparing liquor, strewed with the preparing powder, stuffed with the prepared oakum or tow; their plumage kept clean during the operation, sewed up with thread steeped in the preparing liquor; the eyes taken out, with the tongue, and both places washed with the same liquor; the mouth must be filled with prepared tow in great birds; the eyes filled up with putty, and, when dry, painted with oil-colour after the natural colour of live birds of the same species, and then dried in an oven: however, as there is all the meat on the bird left, care must be taken not to take too plump or too fat birds, and dry them slowly under the same precaution as mentioned N° I. The operation must be repeated till the bird be perfectly dry. The attitude may be given to the bird before he be put into the oven, by wires that are sharp on one end, and thrust through the bird's legs, body, breast, and neck, and others going through the wings and body. Small birds are likewise well preserved in brandy, rack, or rum; and when arrived at the place of their destination, they must be washed and sweetened in fresh water for several times, and lastly dipped in the preparing liquor, the plumage laid in order, the attitude given to the bird by wires, and then dried. Care must be taken to kill the birds with shot proportioned to their size, and at a reasonable distance, that the specimen may not be mangled and torn. Young birds which have not yet moulted, must not be taken, but old birds in full feather, and, if possible, a specimen of each sex; for the sexes often vary very much in size, feather, and colour. The nests of birds and their eggs would likewise contribute towards perfecting the history of this branch of zoology.

IV. All kinds of Reptiles, as snakes, lizards, and frogs, and small tortoises, must be put into brandy or rum with alum in it: observe not to take such snakes or lizards as have accidentally lost their tails: the scales of these animals must be carefully preserved.

V. Fish

V. Fish of all denominations will likewise bear sending in bottles or kegs with brandy or rum. The fins, and tails of the fish, their scales, and in some kinds, the beards, or other small characteristic appendages, must not be rubbed, torn, or destroyed.

VI. Insects may be caught in a pair of forceps covered with fine green or white gauze, which for better security may be sewed over either with silk or thread. The collector must have a pincushion, with three or four different sizes of pins, calculated for the different sizes of the insects; one or two chip-boxes lined on top and bottom with cork, all steeped in the preparing liquor; one or more larger store-boxes at home to put therein the insects caught in the various excursions; a large Muscheto gauze-net made in the shape of a bat fowling-net, which is to be got ready made in London; and a thread net with small meshes on a round wire hoop fixed to a long pole, in order thus to catch insects that live in water. With these instruments all insects may easily be caught. The beetles must have the pin run through one of their wing-shells; the half-winged insects through the thorax, and so likewise must be done to butterflies, hawk-moths, and moths, to the insects with four and two membranaceous wings, and some of the insects without wings. As the papilionaceous insects very frequently beat their wings, and thus rub off the fine scales covering them, it is necessary to give these creatures, when in the forceps or net, a gentle squeeze at the insertion of the wings in the body, and to put them, when returned home from an excursion, on a large pincushion, by which means they will be enabled to rest their feet on, and this will prevent their fluttering. Beetles, and many of the half-winged insects, may be dipped in the preparing liquor, which will kill and put them soon out of pain and prevent small insects from destroying them. The greater part of beetles may with as great propriety be plunged into a bottle,

bottle, with rum or rack, and thus sent over. This can likewise be done with all marine insects, small crabs, millepees, centipees, spiders, gally worms, scorpions, &c. and many curious grubs or caterpillars, which are the first state which beetles and butterflies, moths, &c. live in. To each insect, not in spirits, put a small paper, on which is marked the time of the year it is caught in, the plant or food it lives upon, its changes, and what animals feast again upon the insect, and other such particularities.

VII. The shells, both those found in fresh water-lakes, ponds, and rivers, and those that live only in the ocean, must not be chosen among those that lie on the shores of the sea and fresh waters, and have been broken and injured, or rolled by the waves and exposed to the air and sun and thus calcined; but rather as fresh as possible, and with the animal in it: one or two specimens of which may be preserved in Spirits: from the rest extract the animal, and keep the shell, when perfectly dry and sweet, packed up in cotton, tow, or moss. The same is to be done with the echini or sea-eggs, and other crustaceous animals; especially be careful to preserve their curious spines.

VIII. The harder and stone-like animal productions of the sea, comprehended under the names of Madrepores, Millepores, Cellepores, Corals, and Gorgonias, are either without its inhabitants, and then they want no other care but a good packing in cotton or tow; or the animal is still alive, and then it would be necessary to put the specimen in a flat vessel filled with Sea-water, and to watch the moment when the animal puts out its arms or branches, and then to pour instantly a good quantity of strong spirit into the water, so that the acid of the liquor may prevent the animal from drawing in its branches or arms: after this, the animal may be
put

put into another glass, with new rum poured on it; the glass must be well corked, and covered with putty and a bladder. All the alcyoniums, sponges, hornwracks, pipe-corals, coralines, sea-feathers, and other curious zoophytes, must be treated in the same manner; as this would be a means to acquaint us with the various inhabitants of this curious tribe of marine productions.

IX. The various worm-like animals comprehended under the name of *Mollusca*, may be best preserved in rum or brandy: only observe to pour the rum on them, when they are putting out their arms, eyes, horns, tentacula, and other parts of their frame.

X. To the quadrupeds, birds, reptiles, fish, and in general to all the specimens, must be fixed lead tickets by means of a wire, and a number on the lead scratched in; which must be referred to, in a paper, where under the same number the collector would be pleased to write the name by which the animal goes in his country, or among the various tribes of Indian nations, with the food, age, growth, nature, manners, haunts, how many young or eggs it brings forth, in what manner it is caught, what it is used for, &c. &c.

XI. The vegetable world affords such an immense variety of productions of so great and varied uses for the various purposes and wants of human society; that it would be rather blameable in men to be indolent in respect to them. Old England can justly glory in being possessed of the greatest variety of plants of all kinds; but even these glorious and spirited efforts in this branch of knowledge, are not yet sufficient to make us acquainted with all the productions of the vegetable kingdom, and their various uses. Besides this, their cultivation at large is often impossible in our cold climate, and reserved for a more mild and happy one, beyond

beyond the Atlantic: nothing is therefore more necessary than to facilitate the transportation of seeds and plants into distant countries in a state of vegetation. The ingenious and great promoter of natural history, John Ellis, Esq; has favoured the world with a curious pamphlet, containing the best directions for that purpose; it would be therefore superfluous to repeat what he has already said, were it not necessary to make my performance more compleat, by inserting a few hints abstracted from his useful publication; and adding to it some remarks of my own.

Seeds of all kinds, intended to be sent abroad, must be collected perfectly ripe in dry weather, and kept dry without exposing them to sunshine. Hard nuts, and leguminous seeds, may be plunged for a moment in the preparing liquor and then dried again, as this would prevent insects from attacking them. In general must the seeds be previously examined, and care taken that no insects may be sent with them; this can sometimes be discovered by the naked eye, sometimes by a magnifying glass, and by a little brown or black spot on the outside of the seed; such ripe and chosen seeds, if of a good size, each of them may be wrapped in a flat piece of bees-wax; if small or quite minute, many may be put together in such a piece of bees-wax, or, what is still better, in a piece of cerate paper, i. e. paper steeped in melted bees-wax, and all these parcels must be put in a pot or box, proportionate to the quantity of seeds you have, filled with melted wax, to the height of about the size of the seeds you are to send, or the parcels you have made; and when the wax is pretty cool, but still soft, lay your seeds or parcels in rows in the soft wax, and then fill again some melted wax in, and proceed to lay seeds in the same manner till your pot or box be full. Pulpy seeds, as those of strawberries, mulberries, arbutus's,

D

may

may be squeezed together, pressing out the watery particles, drying these small cakes, and then putting them in the abovementioned cerate paper. Or small seeds mixed with dry sand, and put in cerate paper, packed in proportionate glasses, and covered with a bladder or leather, and all such glasses again packed in a vessel, filled with a mixture, consisting of half culinary salt, the other half of two parts of saltpetre, and one part of sal ammoniac, will keep the seeds cool, and preserve their vegetative power.

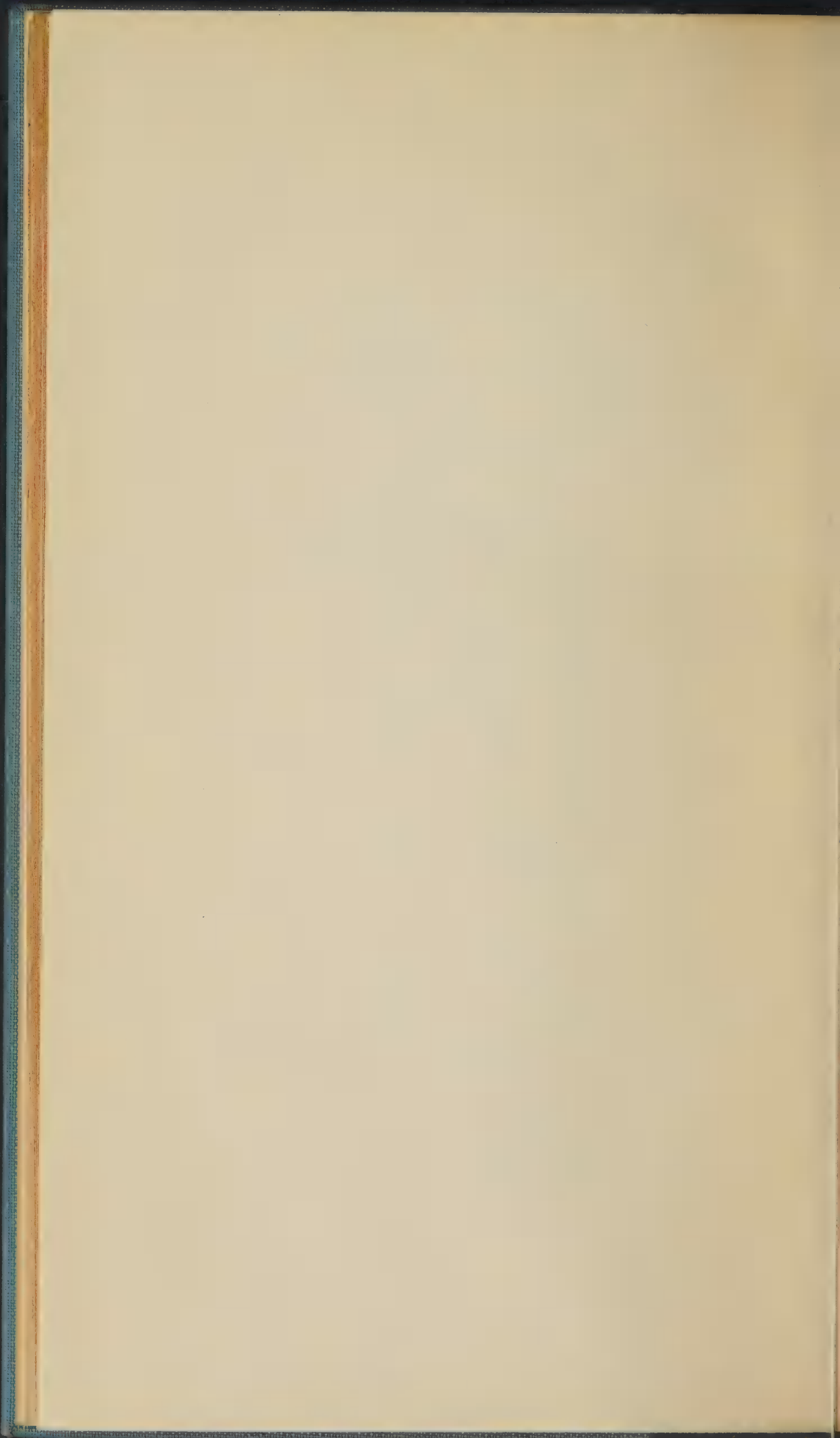
Plants or shrubs that are to be transported, must be taken out with a lump of soil covering the roots, which must be wrapped in wet moss, surrounded with paper or a Russian bast-mat and packthread; plants thus packed may be put in a chest or box upon a layer of three inches deep wet moss in close rows, filling up all vacancies with moss. Some holes or slips in the lid of the box, covered with bast-mats or sail-cloth, will give them air, and a direction must be fixed on top, to keep the lid uppermost, and the box in an open but shady airy place, out of the spray of the sea: the same caution, in regard to air and sea, must be taken with the boxes containing seeds.

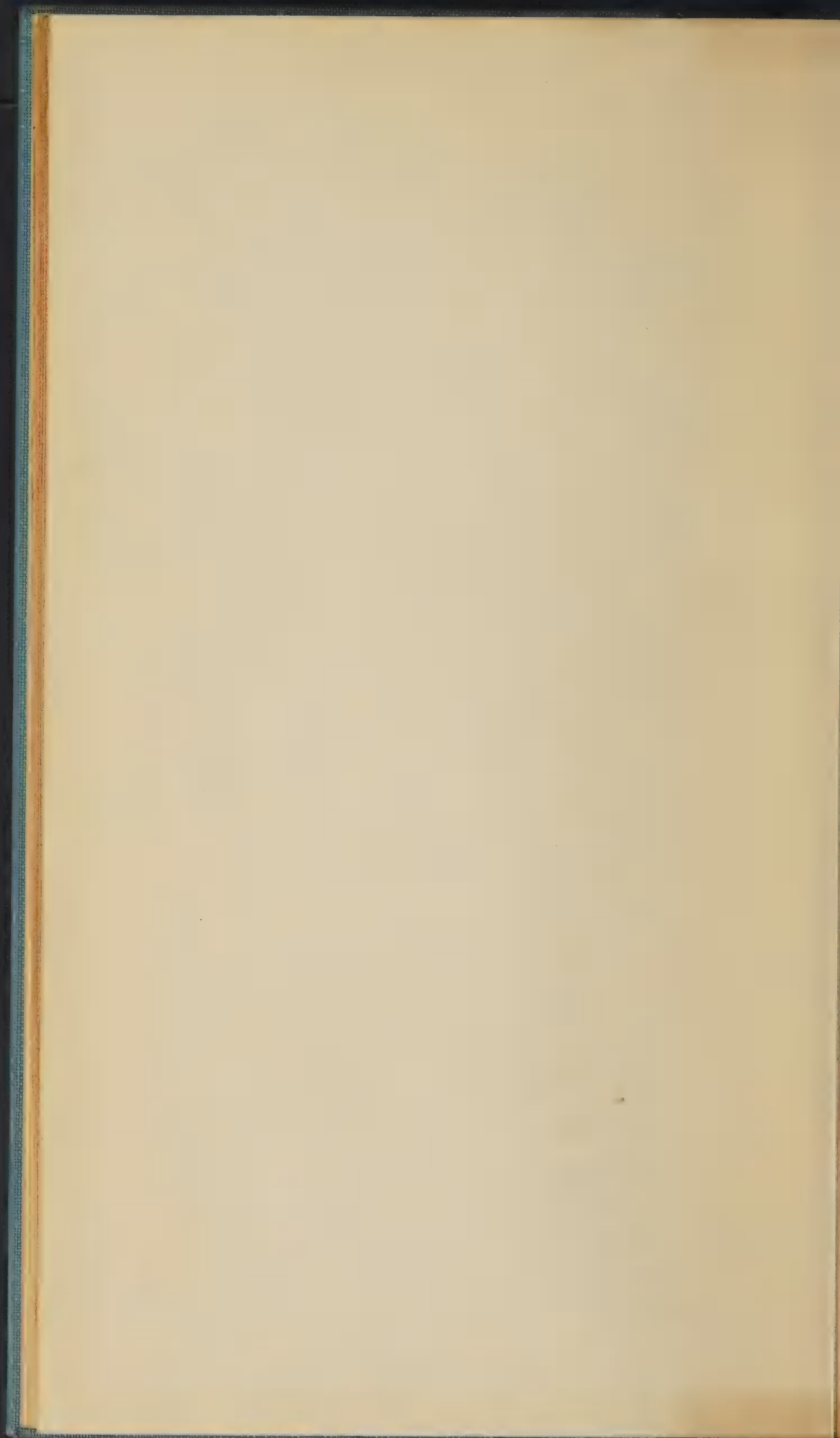
XII. Minerals, fossils, and petrefactions of all kinds, ought to be wrapt separately in papers, and the whole collection packed in hay, tow, hemp, or cotton, in a box, so that none of the specimens may touch or rub one another when the box is transported by land-carriage, or shaken by the rolling of the sea. Clays, earths, sands, and salts, are best preserved in glasses, or little glazed gally-pots covered with a bladder. Mineral waters may be safely filled in glass bottles, immediately after corked up and pitched, or covered with putty round the cork.

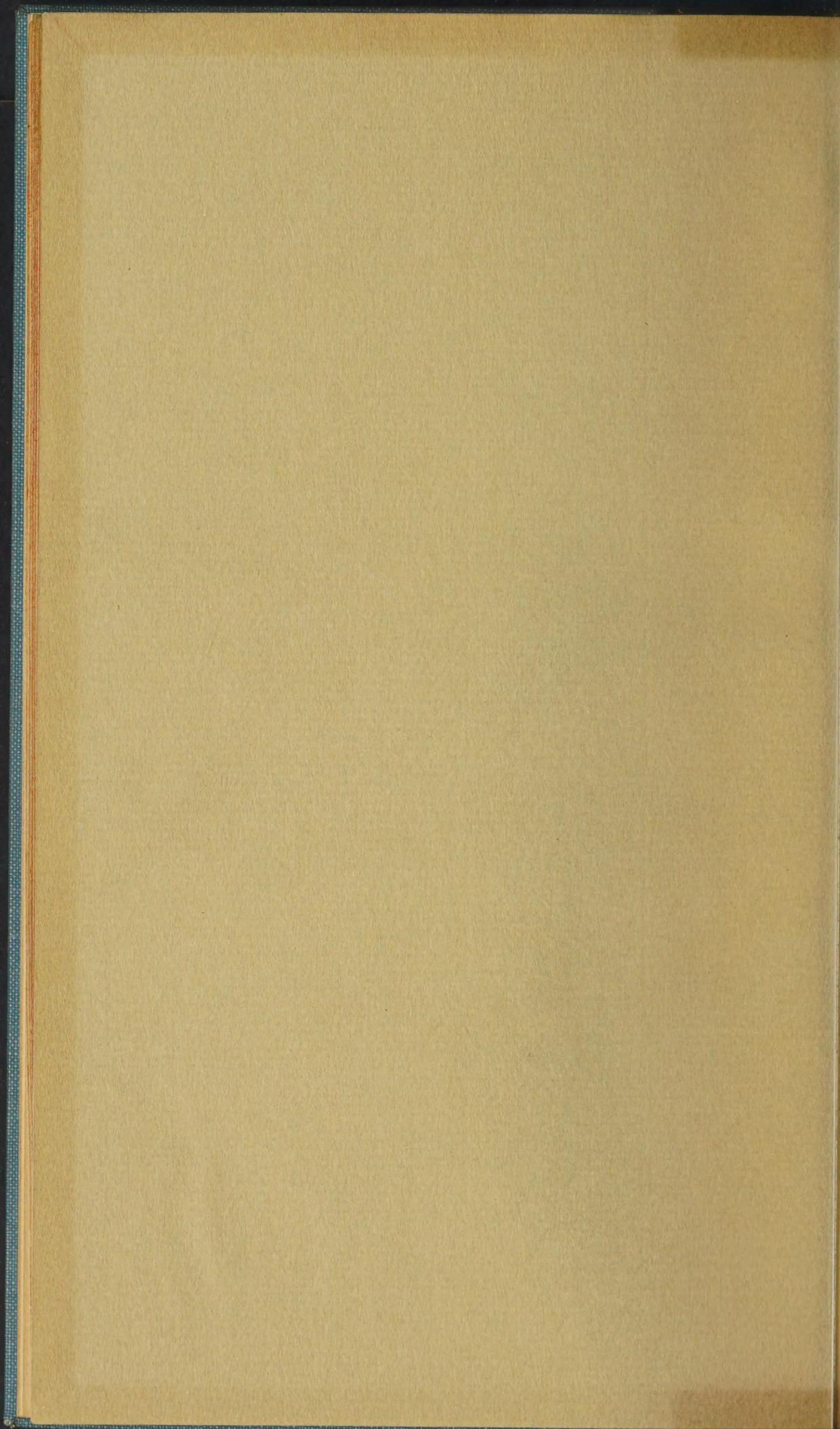
XIII.

XIII. Though antiquities are no ways in connection with Natural History, it will however, be very acceptable, if the curious of North America will collect and communicate to their friends in Great Britain, all the inscriptions, arms, vases, utensils, idols, and other things, found in that continent, capable of throwing a light on the history and antiquities of its first inhabitants.

181505







495258

